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### UM geologist and colleague find rarest fossil on record

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# University of Montana

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## MEDIA RELEASE

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UM GEOLOGIST AND COLLEAGUE  
FIND RAREST FOSSIL ON RECORD

MISSOULA--

The rarest fossil known was discovered in West Germany by University of Montana geologist George D. Stanley and a German colleague, Wilhelm Sturmer, a resident of Erlangen. Publications in which the find has been reported include Science, in July, and Nature, in June.

They found the remains of a small organism identified as a ctenophore, or comb-jelly, in dark slate rocks over 400 million years old.

The tiny fossil, less than a half inch long, is entombed within the slate. They came upon it by accident while they were doing x-ray studies of more common fossil trilobites, which are marine organisms having the segments of the body divided into three lobes by furrows on one surface.

"Ctenophores abound in today's oceans," Stanley says. "They exist as globular, gelatinous, glowing, swimming animals with tentacles. They represent a distinct phylum of living organisms."

Stanley says a phylum is a fundamental type of animal organization and that most biologists classify animal life into 21 phyla. Man, for example, belongs to the Phylum Chordata, along with fish, amphibians, reptiles and birds. Trilobites, crabs, insects and spiders are examples of another phylum.

Stanley says that until he and Sturmer made their discovery, ctenophores were the only phylum not yet found as fossils.

(over)



UM geologist--add one

"Because ctenophores are 99 percent water, the chance of their becoming fossils was considered highly unlikely by most scientists," he says. "As a single fossil specimen representing a whole phylum of living organisms, the one in West Germany is certainly the rarest fossil yet known."

He noted that the presence of ctenophores 400 million years ago, back in the Devonian Period, establishes them as a very ancient group.

Stanley is first author and Sturmer is co-author of an article about their find published in the June 9 issue of Nature magazine.

Stanley did paleontological research as a Senior Fulbright Fellow in the Federal Republic of Germany in 1981-82. He was a research associate at the Smithsonian Institution from 1978 to 1981, and he joined the UM faculty in 1982. He holds a Ph.D. from the University of Kansas.

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